

# Claims

- [c1] An electrical connector assembly mountable on a printed circuit board, comprising:  
an insulative housing;  
a plurality of contacts received in the insulative housing, each contact comprising a contacting portion and a connecting portion adapted for being soldered to the printed circuit board; and  
a pick-up cap removably assembled to the insulative-housing and retaining and positioning the contacts in the insulative housing.
- [c2] The electrical connector assembly as claimed in claim 1, whereinOLE\_LINK2 the pick-up cap comprises a plurality of slots defined therein, and wherein the contacting portions of the contacts are received in the slots.
- [c3] The electrical connector assembly as claimed in claim 2, wherein the pick-up cap comprises a smooth upper surface and an opposite lower surface, the pick-up cap comprises a plurality of ribs formed on the lower surface, and wherein the slots are recessed in the ribs.
- [c4] The electrical connector assembly as claimed in claim 1,

wherein the contact comprises a retention portion connecting the contacting portion and the connecting portion thereof.

[c5] The electrical connector assembly as claimed in claim 4, the connecting portion of the contact is formed into a solder pad.

[c6] The electrical connector assembly as claimed in claim 4, wherein the insulative housing comprises a mating surface and an opposite mounting surface, the housing defines a plurality of passages extending from the mating surface toward the mounting surface, and wherein the contacts are respectively received in the passages.

[c7] The electrical connector assembly as claimed in claim 4, wherein each passage of the insulative housing comprises a pair of opposite slots defined therein to form a pair of steps in a middle thereof, and wherein each contact comprises a pair of shoulders formed on the contacting portion thereof and engaged with the steps of the passage.

[c8] The electrical connector assembly as claimed in claim 4, wherein the solder pads of the contacts are substantially coplanar with the mounting surface of the insulative housing.

- [c9] The electrical connector assembly as claimed in claim 1, wherein the insulative housing comprises a polarizing tab, and wherein the cap has an engaging ear engaging with the polarizing tab of the housing.
- [c10] The electrical connector assembly as claimed in claim 1, further comprising a plurality of solder balls fused onto the solder pads of the contacts before the contacts are assembled to the insulative housing.
- [c11] The electrical connector assembly as claimed in claim 9, wherein the insulative housing comprises a planar base and a periphery wall extending vertically from periphery of the base, and wherein the passages are defined in the base.
- [c12] The electrical connector assembly as claimed in claim 11, wherein the periphery wall comprises a pair of longitudinal walls and a pair of lateral walls, and wherein the polarizing tab is formed on the lateral wall.
- [c13] The electrical connector assembly as claimed in claim 12, wherein the pick-up cap is of a rectangular plate comprising a pair of lengthwise sides and a pair of lateral sides, each lengthwise side forms a claw thereon, and wherein each longitudinal wall defines a recess therein to receive the claw.

- [c14] A method of assembling an electrical connector assembly, comprising the steps of:  
providing an insulative housing comprising a mounting surface; providing a pick-up cap;  
providing a contact; assembling the contact to the pick-up cap; and  
assembling the pick-up cap with the contact to the insulative housing.
- [c15] The method of assembling an electrical connector assembly as claimed in claim 14, wherein the step of providing the pick-up cap comprises defining a slot therein, and wherein the contact comprises a contacting portion received in the slot and a connecting portion opposite to the contacting portion.
- [c16] The method of assembling an electrical connector assembly as claimed in claim 15, wherein the step of providing the pick-up cap comprises forming a rib thereon, and wherein the slot is recessed in the rib.
- [c17] The method of assembling an electrical connector assembly as claimed in claim 15, further comprising a step of fusing a solder ball onto the connecting portion of the contact before the step of preloading the pick-up cap with the contact to the insulative housing.

[c18] The method of assembling an electrical connector assembly as claimed in claim 15, further comprising a step of fusing a solder ball onto the connecting portion of the contact after the step of pressing the pick-up cap toward the mounting surface of the insulative housing.

[c19] The method of assembling an electrical connector assembly as claimed in claim 15, wherein the step of assembling the pick-up cap with the contact to the insulative housing comprises preloading the pick-up cap with the contact to the insulative housing and pressing the pick-up cap toward the mounting surface of the insulative housing until an end of the connecting portion of the contact is coplanar with the mounting surface of the insulative housing.

[c20] An electrical connector assembly comprising:  
a printed circuit board;  
an insulative housing located above the printed circuit board and defining a plurality of vertical passageways;  
a pick-up cap detachably attached to a top portion of the housing and providing thereon an upward flat suction facing away from the housing; and  
a plurality of contacts disposed in the corresponding passageways, respectively, each of said contacts including opposite upper and lower portions; wherein

the pick-up cap reliably holds the upper portions of the contacts before and during soldering the lower portions of the contacts to the printed circuit board, while is removed from the housing, under a condition that the upper portions of the contacts are configured to prevent upward movement of the housing relative to the contacts after said pick-up cap is removed.